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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/774,926	02/06/2004	Howard Morgenstern	34298	8861

7590 04/20/2005

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EXAMINER

PAREKH, NITIN

ART UNIT	PAPER NUMBER
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2811

DATE MAILED: 04/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/774,926	Applicant(s) MORGENSTERN ET AL.	
	Examiner Nitin Parekh	Art Unit 2811	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 12-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>07-14-04</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's election without traverse of Embodiment 1 of Group I, claims 1-11 in Paper No. 2 is acknowledged.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3 and 6-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Zhou (US Pat. Application Pub. 2002/0005574).

Regarding claims 1-3 and 6-8, Zhou discloses a cover/enclosure for hermetically sealing an electronic package/microsystem (see 400 and 300 respectively in Fig. 5), the cover/enclosure comprising:

- a substrate (312/302 in Fig. 5) whereupon the electronic package/microsystem is located
- a single piece/rigid lid/cover (see 400 in Fig. 5) including walls, a top and a cavity (see 400 in Fig. 5; sections 0047-0050)
- a single solder/solder perform (not numerically referenced in Fig. 5) interposed directly between the single piece/rigid lid/cover and the substrate in order to

facilitate creating a hermetically sealed cavity defined by the single piece/rigid lid/cover and the substrate for enclosing the microsystem, solder/solder perform including a conventional gold-tin solder (section 0054).

(Fig. 5; sections 0045-0054).

Zhou further discloses single piece/rigid lid/cover having a gold plating over a nickel plating, the thickness of the platings being approximately in a range of 0.000050-0.00015 inches (see section 0047).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4, 5 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhou (US Pat. Application Pub. 2002/0005574) in view of Stark (US Pat. 6759590) and Leung et al. (US Pat. 6661090).

Regarding claims 4, 5 and 9-11, Zhou teach substantially the entire claimed structure as applied to claims 1-3 and 6-8 above, except the solder perform having a thickness of thickness of approximately 0.003 inches and a composition of approximately 80% gold and 20% tin respectively.

Stark et al. teaches a hermetically sealing electronic package/microsystem (102/302 in Fig. 1-3 and 11) using an eutectic gold-tin solder wherein the solder layer has a thickness in a range of 6 microns/0.002 inches- 101 microns (about 0.04 inches- see Col. 29, lines 20-49).

Leung et al. teach a sealing a lid to a substrate of an electronic package with a gold-tin solder having a composition including 80% gold and 20% tin (see 430 in Fig. 4d Col. 3, line 51- Col. 4, line 30).

It would have been obvious to a person of ordinary skill in the art at the time invention was made to incorporate the solder perform having a thickness of thickness of approximately 0.003 inches and a composition of approximately 80% gold and 20% tin respectively as taught by Stark and Leung et al. so that the bonding, adhesion and reliability can be improved in the Zhou's enclosure.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nitin Parekh whose telephone number is 571-272-1663. The examiner can normally be reached on 09:00AM-05:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lee can be reached on 571-272-1732. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9318.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

NP

04-15-05


NITIN PAREKH

PRIMARY EXAMINER

TECHNOLOGY CENTER 2800